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Art Unit 1652

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Cover Sheet + 20 Pages

Message:

RE: Patent Application No.: 09/725,309

Filed: 11/29/2000

Inventor: Singh et al.

Docket No.: NC 79,212

Response to rejection – 3 pages

Declarations – 4 pages

Attachments – 13 pages

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OFFICIAL 002

PATENT APPLICATION
Navy Case No.: 79,212

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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MAR 11 2004

In the application of: Singh et al.

Serial No.: 09/725,309

Filed: 11/29/2000

For: PASSIVATION OF NERVE AGENTS BY SURFACE MODIFIED ENZYMES
STABILIZED BY NON-COVALENT IMMOBILIZATION ON ROBUST, STABLE
PARTICLES

Examiner: Hutson, Richard

Art Group Unit: 1652

Honorable Commissioner of Patents

PO Box 1450

Alexandria, VA 22313-1450

March 11, 2004

RESPONSE TO NON-FINAL REJECTION

Sir:

In response to the Office action of 12/19/2003, setting a three month shortened statutory period of response, please consider the following remarks.

Claims 3, 4, 7-15, 21, and 23-26 are pending in the application. Claims 3, 4, 7, 8, 15, 24, and 25 are presently allowed.

Claim rejections – 35 U.S.C. § 102

Claims 9-12, 14, 21, 23, and 26 have been rejected under 35 U.S.C. § 102(e) as anticipated by Xiao et al. (US 6,593,099).

Claim 9 is to a method for stabilizing a thioesterase comprising genetically engineering the thioesterase to include one or more terminal histidine residues; and attaching the genetically engineered thioesterase to salt groups selected from the group consisting of metal salts of iminodiacetic acid (IDA), metal salts of nitrilotriacetic acid (NTA), and mixtures thereof on the surface of a particulate inorganic carrier.

Xiao is directed to recombinant human S-acyl fatty acid synthase thioester-like polypeptides having a His6 reporter tag. Xiao discloses, but does not claim, that the polypeptide

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can be isolated by affinity chromatography with NINTA resin (col. 34, lines 46-56). As the reference is a US Patent purported to disclose the claimed invention without claiming the invention, the reference can be disqualified as prior art by a declaration under 37 C.F.R. § 1.131. The 102(e) date of Xiao is 06/26/2000, the filing date of the earliest provisional application of which the benefit was claimed. The attached declarations and evidence establish that the present invention was conceived and actually reduced to practice before 06/26/2000.

The declaration of inventor Singh establishes that the addition of histidine sites to thioesterase and immobilizing the enzyme on a substrate other than polymerized vesicles was conceived by 06/02/1997. The Singh declaration also establishes that silica was modified with IDA by 03/16/1998. The declaration of inventor Markowitz establishes that the binding of accessible histidine groups copper-IDA salts on silica particles was conceived by 03/10/1998. The invention disclosure establishes that the method had been actually reduced to practice by 04/21/1998.

As the conception and reduction to practice of the invention of claim 9 occurred before the 102(e) date of the reference, the reference cannot be used as the basis for a rejection of claim 9, or of claims 10-12, 14, 21, 23, and 26 dependent thereon.

Claim rejections – 35 U.S.C. § 103

Claim 13 has been rejected under 35 U.S.C. § 103(a) as unpatentable over Xiao and Lu et al. (*J. Biol. Chem.*, 271(9), 5059-5065 (1996)). Claim 13 depends from claim 9 and, as explained above, Xiao is disqualified as a reference against this claim.

In view of the foregoing, it is submitted that the application is now in condition for allowance.

In the event that a fee is required, please charge the fee to Deposit Account No. 50-0281,

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and in the event that there is a credit due, please credit Deposit Account No. 50-0281.

Respectfully submitted,



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CERTIFICATION OF FACSIMILE TRANSMISSION

I certify that this paper is being facsimile transmitted to the Patent and Trademark Office
on the date shown below.

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